

ELECTROMAGNETIC EMISSION COMPLIANCE REPORT FOR LOW-POWER, NON-LICENSED TRANSMITTER

Test Report No. : W168R-D060

AGR No : A168A-288

Applicant : BARO TECHNOLOGY CO., LTD.

Address : 6F Sewon Bldg, 314-9, Seoksu-dong, Manan-gu, Anyang-si, Gyeonggi-do, 13970, Korea

Manufacturer : BARO TECHNOLOGY CO., LTD.

Address : 6F Sewon Bldg, 314-9, Seoksu-dong, Manan-gu, Anyang-si, Gyeonggi-do, 13970, Korea

Type of Equipment : Wireless Charging Pad

FCC ID. : 2AJM9-BTWC-001

Model Name : BTWC-001

Serial number : N/A

Total page of Report : 25 pages (including this page)

Date of Incoming : August 25, 2016

Date of issue : August 31, 2016

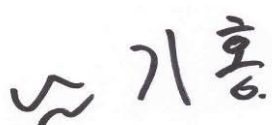
SUMMARY

The equipment complies with the regulation; **FCC CFR47 Part 15 Subpart C Section 15.207 and 15.209, 2.1049.**


This test report only contains the result of a single test of the sample supplied for the examination.

It is not a generally valid assessment of the features of the respective products of the mass-production.

Reviewed by:


Ki-Hong, Nam / Asst, Chief Engineer
ONETECH Corp.

Approved by:


Sung-Ik, Han / Managing Director
ONETECH Corp.

CONTENTS

PAGE

1. VERIFICATION OF COMPLIANCE	5
2. TEST SUMMARY	6
2.1 TEST ITEMS AND RESULTS	6
2.2 ADDITIONS, DEVIATIONS, EXCLUSIONS FROM STANDARDS.....	6
2.3 RELATED SUBMITTAL(S) / GRANT(S)	6
2.4 PURPOSE OF THE TEST	6
2.5 TEST METHODOLOGY.....	6
2.6 TEST FACILITY.....	6
3. GENERAL INFORMATION	7
3.1 PRODUCT DESCRIPTION.....	7
3.2 MODEL DIFFERENCES.....	7
4. EUT MODIFICATIONS	7
5. SYSTEM TEST CONFIGURATION	8
5.1 JUSTIFICATION.....	8
5.2 PERIPHERAL EQUIPMENT	8
5.3 MODE OF OPERATION DURING THE TEST	8
5.4 CONFIGURATION OF TEST SYSTEM.....	9
5.5 ANTENNA REQUIREMENT	9
6. PRELIMINARY TEST	10
6.1 AC POWER LINE CONDUCTED EMISSIONS TESTS.....	10
6.2 GENERAL RADIATED EMISSIONS TESTS	10
7. 20 DB BANDWIDTH	11
7.1 OPERATING ENVIRONMENT	11
7.2 TEST SET-UP	11
7.3 TEST DATA.....	11
8. SPURIOUS EMISSION TEST	12
8.1 REGULATION	12
8.2 TEST SET-UP	12
8.3 TEST DATA FOR USING MAX LOAD (1 120 MA).....	13
8.3.1 <i>Spurious Radiated Emission Below 30 MHz</i>	13

8.3.2 Spurious Radiated Emission below 1 GHz.....	14
8.4 TEST DATA FOR USING MID. LOAD (500 MA).....	15
8.4.1 Spurious Radiated Emission Below 30 MHz	15
8.4.2 Spurious Radiated Emission below 1 GHz.....	16
8.5 TEST DATA FOR USING MIN. LOAD (100 MA).....	17
8.5.1 Spurious Radiated Emission Below 30 MHz	17
8.5.2 Spurious Radiated Emission below 1 GHz.....	18
9. CONDUCTED EMISSION TEST.....	19
9.1 TEST DATA FOR USING MAX LOAD (1 120 MA).....	19
9.2 TEST DATA FOR USING MID LOAD (500 MA).....	21
9.3 TEST DATA FOR USING MIN LOAD (100 MA).....	23
9. LIST OF TEST EQUIPMENT	25

Revision History

Issue Report No.	Issued Date	Revisions	Effect Section
W168R-D060	August 31, 2016	Initial Release	All

1. VERIFICATION OF COMPLIANCE

APPLICANT : BARO TECHNOLOGY CO., LTD.
 ADDRESS : 6F Sewon Bldg, 314-9, Seoksu-dong, Manan-gu, Anyang-si, Gyeonggi-do, 13970, Korea
 CONTACT PERSON : Dong Jun, Lee / Chief Executive Officer
 TELEPHONE NO : +82-31-431-2242
 FCC ID : 2AJM9-BTWC-001
 MODEL NAME : BTWC-001
 BRAND NAME : N/A
 SERIAL NUMBER : N/A
 DATE : August 31, 2016

EQUIPMENT CLASS	DCD – Part 15 Low Power Transmitter Below 1 705 kHz
KIND OF EQUIPMENT	Wireless Charging Pad
THIS REPORT CONCERNS	Original Grant
MEASUREMENT PROCEDURES	ANSI C63.10: 2013
TYPE OF EQUIPMENT TESTED	Pre-Production
KIND OF EQUIPMENT AUTHORIZATION REQUESTED	Certification
EQUIPMENT WILL BE OPERATED UNDER FCC RULES PART(S)	FCC CFR47 Part 15 Subpart C Section 15.207 and 15.209, 2.1049
MODIFICATIONS ON THE EQUIPMENT TO ACHIEVE COMPLIANCE	No
FINAL TEST WAS CONDUCTED ON	3 m, Semi Anechoic Chamber

-. The above equipment was tested by ONETECH Corp. for compliance with the requirement set forth in the FCC Rules and Regulations. This said equipment in the configuration described in this report, shows the maximum emission levels emanating from equipment are within the compliance requirements.

2. TEST SUMMARY

2.1 Test items and results

SECTION	TEST ITEMS	RESULTS
15.209, 15.209(a)	Radiated emission, Spurious Emission and Field Strength of Fundamental	Met the Limit / PASS
2.1049	20 dB Bandwidth	Met the Limit / PASS
15.207	Transmitter AC Power Line Conducted Emission	Met the Limit / PASS

2.2 Additions, deviations, exclusions from standards

No additions, deviations or exclusions have been made from standard.

2.3 Related Submittal(s) / Grant(s)

Original submittal only

2.4 Purpose of the test

To determine whether the equipment under test fulfills the requirements of the regulation stated in section 2.1.

2.5 Test Methodology

Radiated testing was performed according to the procedures in ANSI C63.10: 2013 at a distance of 3 m from EUT to the antenna.

2.6 Test Facility

The Onetech Corp. has been designated to perform equipment testing in compliance with ISO/IEC 17025.

The Electromagnetic compatibility measurement facilities are located at 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea

-. Site Filing:

VCCI (Voluntary Control Council for Interference) – Registration No. R-4112/ C-4617/ G-666/ T-1842

IC (Industry Canada) – Registration No. Site# 3736-3

-. Site Accreditation:

KOLAS (Korea Laboratory Accreditation Scheme) - Accreditation NO. KT085

FCC (Federal Communications Commission) - Accreditation No. KR0013

RRA (Radio Research Agency) – Designation No. KR0013

3. GENERAL INFORMATION

3.1 Product Description

The BARO TECHNOLOGY CO., LTD., Model: BTWC-001 (referred to as the EUT in this report) is an Wireless Charging Pad. Product specification information described herein was obtained from product data sheet or user's manual.

DEVICE TYPE	Wireless Charger
OPERATING FREQUENCY	110 kHz ~ 205 kHz
RATED RF OUTPUT POWER	76.20 dBμV/m
ANTENNA TYPE	Coil Antenna
MODULATION	ASK
LIST OF EACH OSC. OR CRY. FREQ.(FREQ. >= 1 MHz)	110 kHz ~ 205 kHz
RATED SUPPLY VOLTAGE	DC 5.0 V

3.2 Model Differences

-. None

4. EUT MODIFICATIONS

-. None

5. SYSTEM TEST CONFIGURATION

5.1 Justification

This device was configured for testing in a typical way as a normal customer is supposed to be used. During the test, the following components were installed inside of the EUT.

DEVICE TYPE	MANUFACTURER	MODEL/PART NUMBER	FCC ID
Main Board	N/A	Verizon	N/A

5.2 Peripheral equipment

Defined as equipment needed for correct operation of the EUT, but not considered as tested: None

5.3 Mode of operation during the test

For the testing, software used to control the EUT for staying in continuous transmitting is programmed.

For final testing, the EUT was set at Max. load (110 kHz), Mid. load (153 kHz), and Min. load (205 kHz). To get a maximum emission levels from the EUT, the EUT was moved throughout the XY, XZ, and YZ planes and the worst case is "XY" axis.

Mode	Charging current	Description
Charging Mode With load	1 120 mA	Using Max. load
	500 mA	Using Mid. load
	100 mA	Using Min. load

5.4 Configuration of Test System

Line Conducted Test : The EUT was connected to adaptor and the power of adaptor was connected to LISN. All supporting equipments were connected to another LISN. Preliminary Power line Conducted Emission test was performed by using the procedure in ANSI C63.10: 2013 to determine the worse operating conditions.

Radiated Emission Test : Preliminary radiated emissions test were conducted using the procedure in ANSI C63.10: 2013 to determine the worse operating conditions. Final radiated emission tests were conducted at 3 m open area test site.
The turntable was rotated through 360 degrees and the EUT was tested by positioned three orthogonal planes to obtain the highest reading on the field strength meter. Once maximum reading was determined, the search antenna was raised and lowered in both vertical and horizontal polarization.

5.5 Antenna Requirement

According to section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

Antenna Construction:

The antenna of the EUT is a Coil Antenna on the main board in the EUT, so no consideration of replacement by the user.

6. PRELIMINARY TEST

6.1 AC Power line Conducted Emissions Tests

During Preliminary Tests, the following operating mode was investigated

Operation Mode	The Worse operating condition (Please check one only)
Transmitting Mode	X

6.2 General Radiated Emissions Tests

During Preliminary Tests, the following operating modes were investigated

Operation Mode	The Worse operating condition (Please check one only)
Transmitting Mode	X

7. 20 dB BANDWIDTH

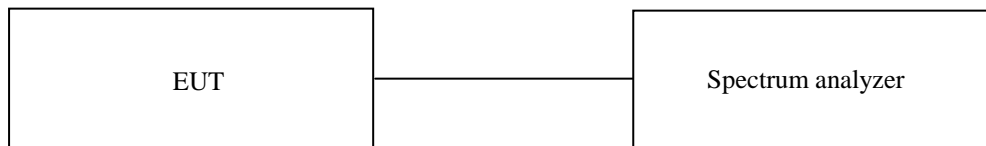
7.1 Operating environment

Temperature : 23.2 °C
Relative humidity : 48.8 % R.H.

7.2 Test set-up

- Span = approximately 2 to 3 times the 20 dB bandwidth, RBW = greater than 1 % of the 20 dB bandwidth, VBW = RBW, Sweep = auto, Detector = peak, Trace = max hold.
- The marker-to-peak function to set the mark to the peak of the emission. Use the marker-delta function to measure 20 dB down one side of the emission. Reset the function, and move the marker to the other side of the emission, until it is (as close as possible to) even with the reference marker level.

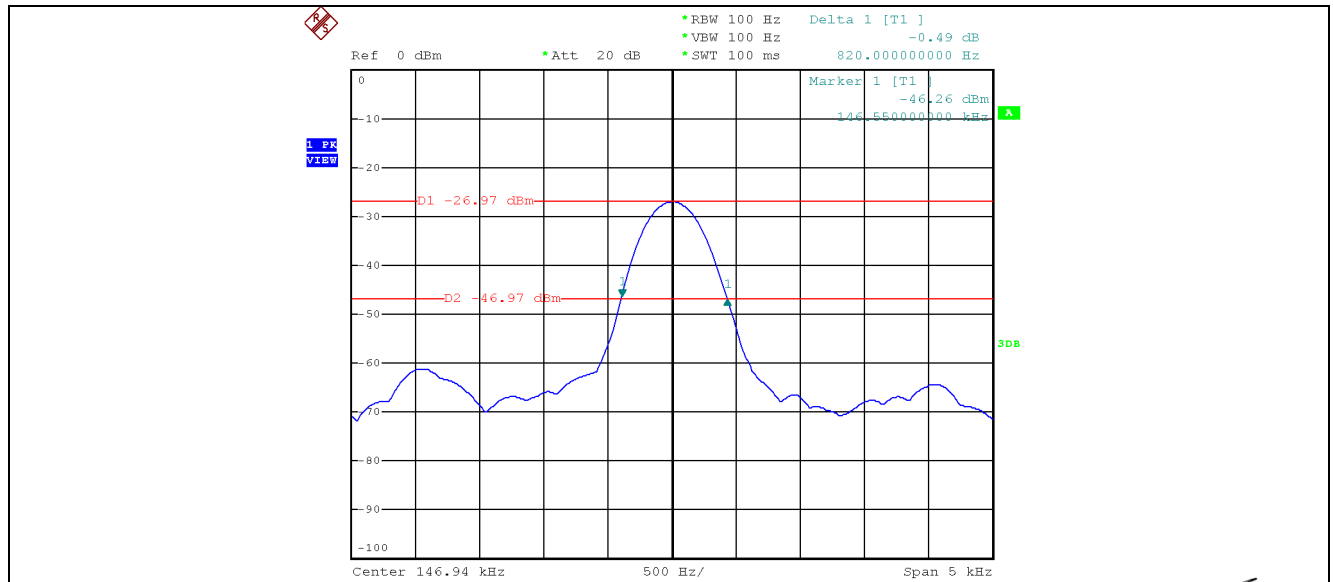
The marker-delta reading at this point is 20 dB bandwidth of the emission.



7.3 Test data

-. Test Date : August 29, 2016

20 dB Bandwidth : 820.0 Hz



Tested by: Seok-Jun, Lee / Engineer

8. Spurious Emission Test

8.1 Regulation

According to §15.209(a), for an intentional device, the general requirement of field strength of radiated emissions from intentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency [MHz]	Field strength [μ V/m]	Field strength [dB μ V/m]	Measurement distance [m]
0.009 ~ 0.490	2 400 / F (kHz)		300
0.490 ~ 1.705	24 000 / F (kHz)		30
1.705 ~ 30	30	29.50	30
30 ~ 88	*100	40.00	3
88 ~ 216	*150	43.52	3
216 ~ 960	*200	46.02	3
Above 960	500	53.98	3

*Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54 ~ 72 MHz, 76 ~ 88 MHz, 174 ~ 216 MHz or 470 ~ 806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.

8.2 Test set-up

The radiated emissions measurements were on the 3 m semi anechoic chamber. The EUT and other support equipment were placed on a non-conductive turntable above the ground plane. The interconnecting cables from outside test site were inserted into ferrite clamps at the point where the cables reach the turntable.

The frequency spectrum from 30 kHz to 1 GHz was scanned and maximum emission levels at each frequency recorded. The system was rotated 360°, and the antenna was varied in the height between 1.0 m and 4.0 ms in order to determine the maximum emission levels. This procedure was performed for horizontal and vertical polarization of the receiving antenna.

8.3 Test data for Using Max load (1 120 mA)

8.3.1 Spurious Radiated Emission Below 30 MHz

Humidity Level : 48.8 % R.H. Temperature: 23.2 °C

Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.209

Frequency Range : 9 kHz ~ 30 MHz

Result : PASSED

EUT : Wireless Charging Pad

Date: August 29, 2016

Operating Condition : Transmitting Mode

Frequency (MHz)	Reading (dBμV)	Ant. Pol. (H/V)	Ant. Factor (dB/m)	Cable Loss	Emission Level(dBμV/m)	Limits (dBμV/m)	Margin (dB)
0.015	35.9	H	21.60	0.1	57.60	124.08	-66.48
0.034	34.6	H	19.50	0.1	54.20	116.97	-62.77
0.098	27.6	V	19.10	0.1	46.80	107.77	-60.97
*0.118	55.5	H	19.00	0.1	74.60	106.16	-31.56
0.391	27.1	V	19.00	0.1	46.20	95.76	-49.56
27.752	42.8	H	20.20	0.8	63.80	70.00	-6.20

-. Remark: "H" Horizontal, "V" Vertical


-. "*" Means Fundamental frequency

-. Emission Level [dB μ V/m] = Reading [dBμV] + Ant. Factor [dB/m] + Cable Loss [dB]

-. Margin [dB] = Emission Level [dBμV/m] – Limit [dBμV/m]

-. Limit calculation: Limit at specified distance + 40log (300/3) = Limit + 80 dB for up to 0.49 MHz

Limit at specified distance + 40log (30/3) = Limit + 40 dB for above 0.49 MHz, Below 30 MHz


Tested by: Seok-Jun, Lee / Engineer

8.3.2 Spurious Radiated Emission below 1 GHz

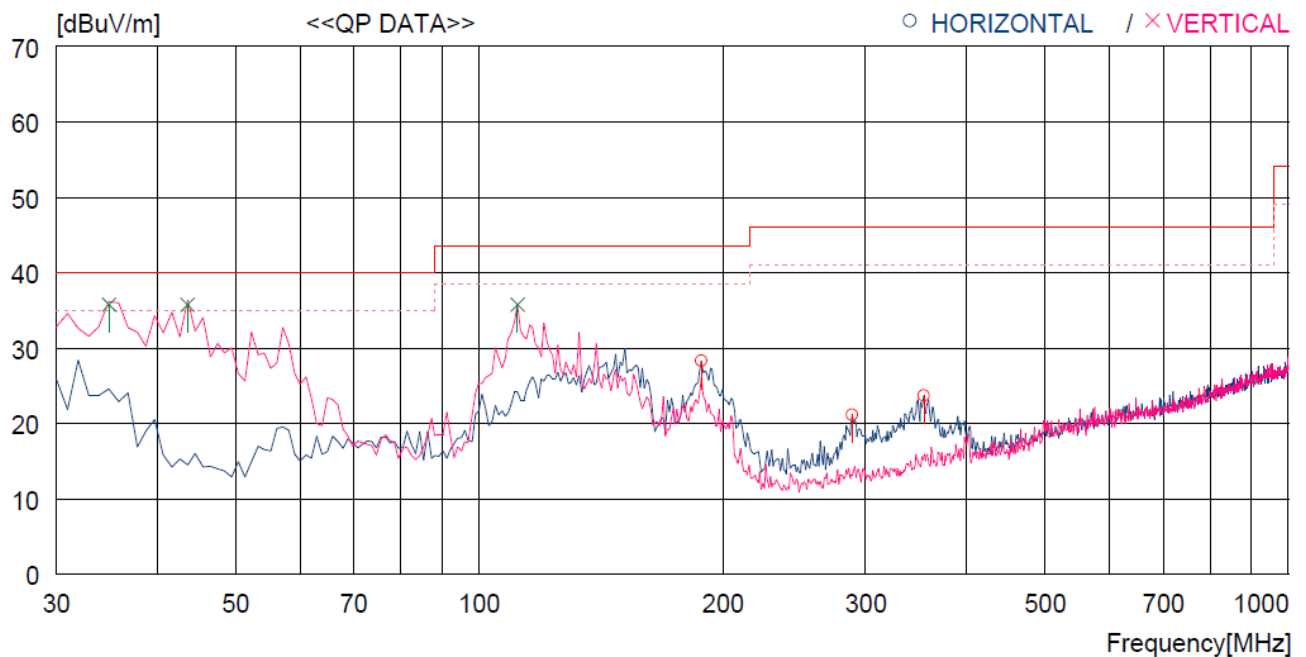
The following table shows the highest levels of radiated emissions on both polarizations of horizontal and vertical.

Humidity Level : 48.8 % R.H. Temperature: 23.2 °C
 Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.209
 Frequency range : 30 MHz ~ 1 000 MHz
 Result : PASSED

EUT : Wireless Charging Pad

Date: August 29, 2016

Operating Condition : Transmitting Mode



No.	FREQ	READING	ANT	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	QP	FACTOR	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[DEG]
----- Horizontal -----										
1	188.110	47.4	10.1	3.6	32.8	28.3	43.5	15.2	100	359
2	288.990	36.3	13.0	4.5	32.7	21.1	46.0	24.9	100	359
3	353.980	37.0	14.3	5.0	32.6	23.7	46.0	22.3	100	180
----- Vertical -----										
4	34.850	54.1	12.7	1.8	32.8	35.8	40.0	4.2	100	2
5	43.580	52.7	14.1	1.9	32.9	35.8	40.0	4.2	100	0
6	111.480	54.8	11.4	2.9	33.3	35.8	43.5	7.7	100	0

Tested by: Seok-Jun, Lee / Engineer

8.4 Test data for Using Mid. load (500 mA)

8.4.1 Spurious Radiated Emission Below 30 MHz

Humidity Level : 48.8 % R.H. Temperature: 23.2 °C

Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.209

Frequency Range : 9 kHz ~ 30 MHz

Result : PASSED

EUT : Wireless Charging Pad

Date: August 29, 2016

Operating Condition : Transmitting Mode

Frequency (MHz)	Reading (dBμV)	Ant. Pol. (H/V)	Ant. Factor (dB/m)	Cable Loss	Emission Level(dBμV/m)	Limits (dBμV/m)	Margin (dB)
0.017	34.8	H	21.60	0.1	56.50	122.99	-66.49
0.032	32.6	H	19.50	0.1	52.20	117.50	-65.30
*0.162	56.2	H	19.10	0.1	75.40	103.41	-28.01
0.415	33.1	V	19.00	0.1	52.20	95.24	-43.04
0.678	30.8	H	19.00	0.1	49.90	70.97	-21.07
27.749	41.9	H	20.20	0.8	62.90	70.00	-7.10

-. Remark: "H" Horizontal, "V" Vertical


-. "*" Means Fundamental frequency

-. Emission Level [dB μ V/m] = Reading [dBμV] + Ant. Factor [dB/m] + Cable Loss [dB]

-. Margin [dB] = Emission Level [dBμV/m] – Limit [dBμV/m]

-. Limit calculation: Limit at specified distance + 40log (300/3) = Limit + 80 dB for up to 0.49 MHz

Limit at specified distance + 40log (30/3) = Limit + 40 dB for above 0.49 MHz, Below 30 MHz


Tested by: Seok-Jun, Lee / Engineer

8.4.2 Spurious Radiated Emission below 1 GHz

The following table shows the highest levels of radiated emissions on both polarizations of horizontal and vertical.

Humidity Level : 48.8 % R.H. Temperature: 23.2 °C

Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.209

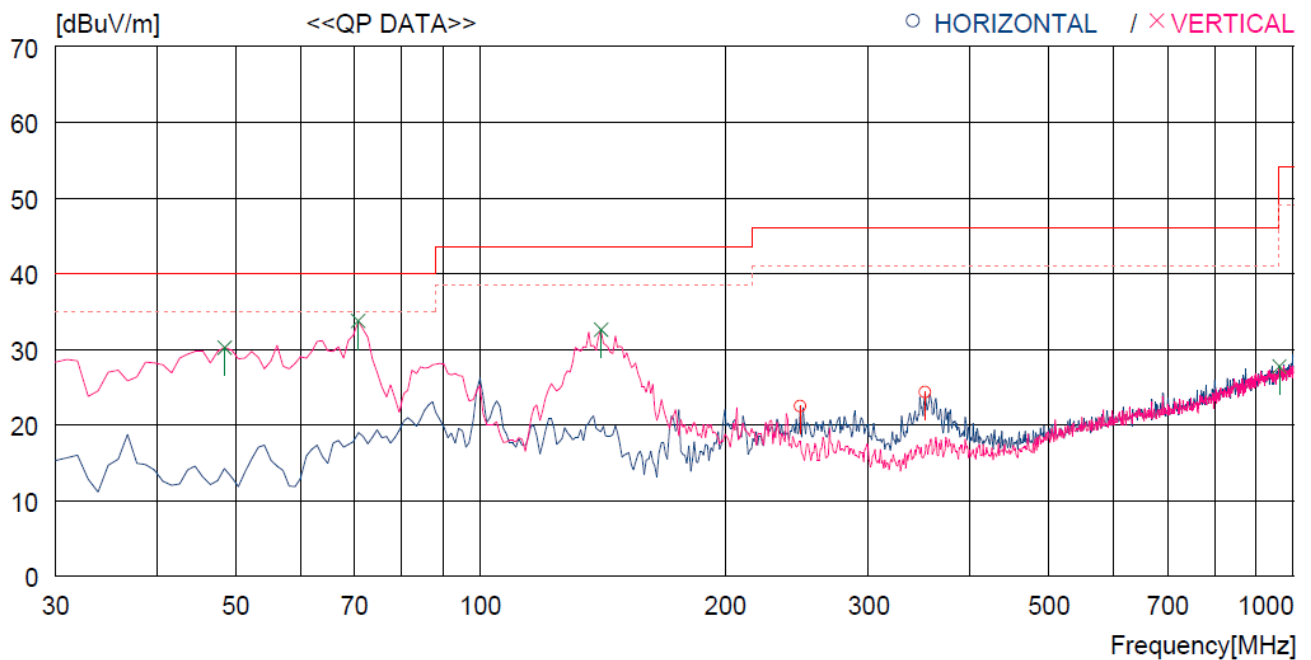
Frequency range : 30 MHz ~ 1 000 MHz

Result : PASSED

EUT : Wireless Charging Pad

Date: August 29, 2016

Operating Condition : Transmitting Mode



No.	FREQ	READING	ANT	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	QP	FACTOR	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[DEG]
----- Horizontal -----										
1	247.280	39.1	12.3	4.1	33.0	22.5	46.0	23.5	100	244
2	352.040	37.5	14.8	5.0	33.0	24.3	46.0	21.7	100	0
----- Vertical -----										
3	48.430	47.0	14.2	2.0	33.0	30.2	40.0	9.8	100	181
4	70.740	55.2	9.2	2.3	33.0	33.7	40.0	6.3	100	188
5	140.580	54.1	8.4	3.2	33.1	32.6	43.5	10.9	100	197
6	961.187	28.7	22.4	8.7	32.1	27.7	54.0	26.3	200	258


Tested by: Seok-Jun, Lee / Engineer

8.5 Test data for Using Min. load (100 mA)

8.5.1 Spurious Radiated Emission Below 30 MHz

Humidity Level : 48.8 % R.H. Temperature: 23.2 °C

Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.209

Frequency Range : 9 kHz ~ 30 MHz

Result : PASSED

EUT : Wireless Charging Pad

Date: August 29, 2016

Operating Condition : Transmitting Mode

Frequency (MHz)	Reading (dBμV)	Ant. Pol. (H/V)	Ant. Factor (dB/m)	Cable Loss	Emission Level(dBμV/m)	Limits (dBμV/m)	Margin (dB)
0.016	35.8	H	21.60	0.1	57.50	123.52	-66.02
0.031	31.6	H	19.50	0.1	51.20	117.77	-66.57
0.078	27.7	V	19.10	0.1	46.90	109.76	-62.86
*0.202	57.1	H	19.00	0.1	76.20	101.49	-25.29
0.421	35.3	V	19.00	0.1	54.40	95.11	-40.71
27.751	40.9	H	20.20	0.8	61.90	70.00	-8.10

-. Remark: "H" Horizontal, "V" Vertical


-. "*" Means Fundamental frequency

-. Emission Level [dB μ V/m] = Reading [dBμV] + Ant. Factor [dB/m] + Cable Loss [dB]

-. Margin [dB] = Emission Level [dBμV/m] – Limit [dBμV/m]

-. Limit calculation: Limit at specified distance + 40log (300/3) = Limit + 80 dB for up to 0.49 MHz

Limit at specified distance + 40log (30/3) = Limit + 40 dB for above 0.49 MHz, Below 30 MHz


Tested by: Seok-Jun, Lee / Engineer

8.5.2 Spurious Radiated Emission below 1 GHz

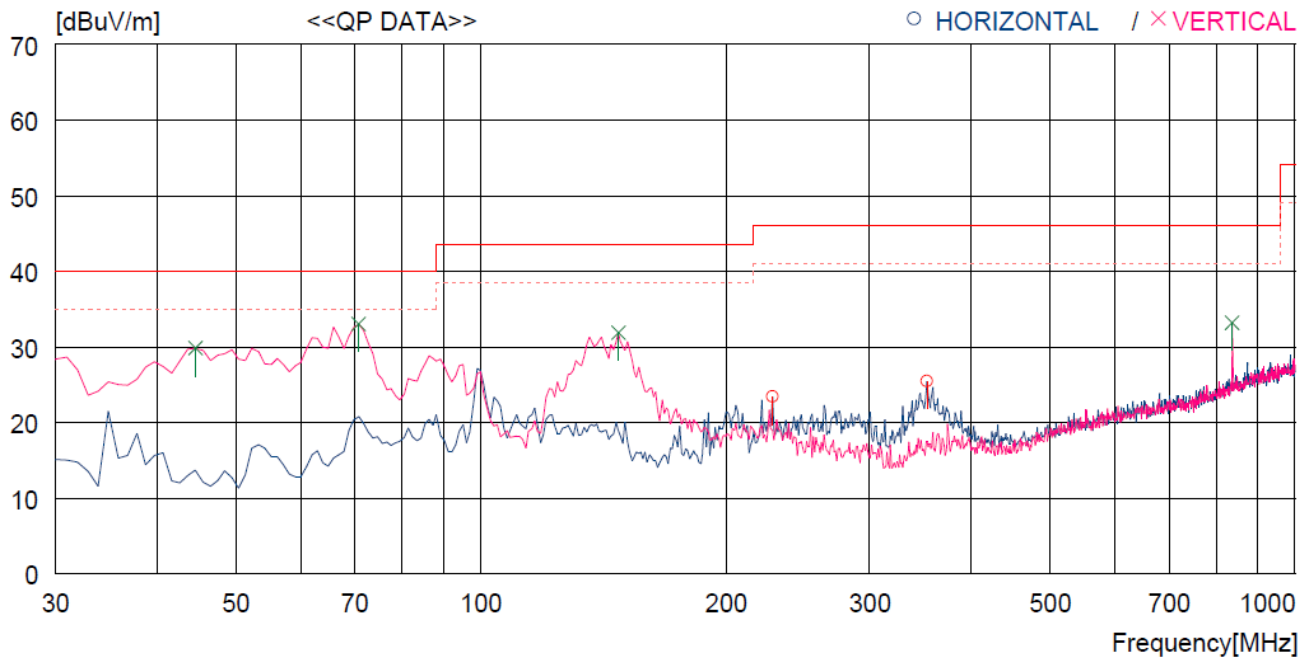
The following table shows the highest levels of radiated emissions on both polarizations of horizontal and vertical.

Humidity Level : 48.8 % R.H. Temperature: 23.2 °C
 Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.209
 Frequency range : 30 MHz ~ 1 000 MHz
 Result : PASSED

EUT : Wireless Charging Pad

Date: August 29, 2016

Operating Condition : Transmitting Mode



No.	FREQ	READING	ANT	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	[dBuV]	FACTOR	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[DEG]
----- Horizontal -----										
1	227.880	40.8	11.6	4.0	33.0	23.4	46.0	22.6	200	87
2	353.010	38.6	14.9	5.0	33.0	25.5	46.0	20.5	100	0
----- Vertical -----										
3	44.550	46.4	14.5	1.9	33.0	29.8	40.0	10.2	100	359
4	70.740	54.5	9.2	2.3	33.0	33.0	40.0	7.0	100	106
5	147.370	53.3	8.5	3.2	33.1	31.9	43.5	11.6	100	128
6	837.031	36.9	21.3	8.1	33.1	33.2	46.0	12.8	400	170

Tested by: Seok-Jun, Lee / Engineer

9. Conducted Emission Test

9.1 Test data for Using Max load (1 120 mA)

Humidity Level : (47 ~ 48) % R.H.

Temperature: (23 ~ 24) °C

Limits apply to : FCC CFR 47, PART 15, SUBPART B, SECTION 15.207(a)

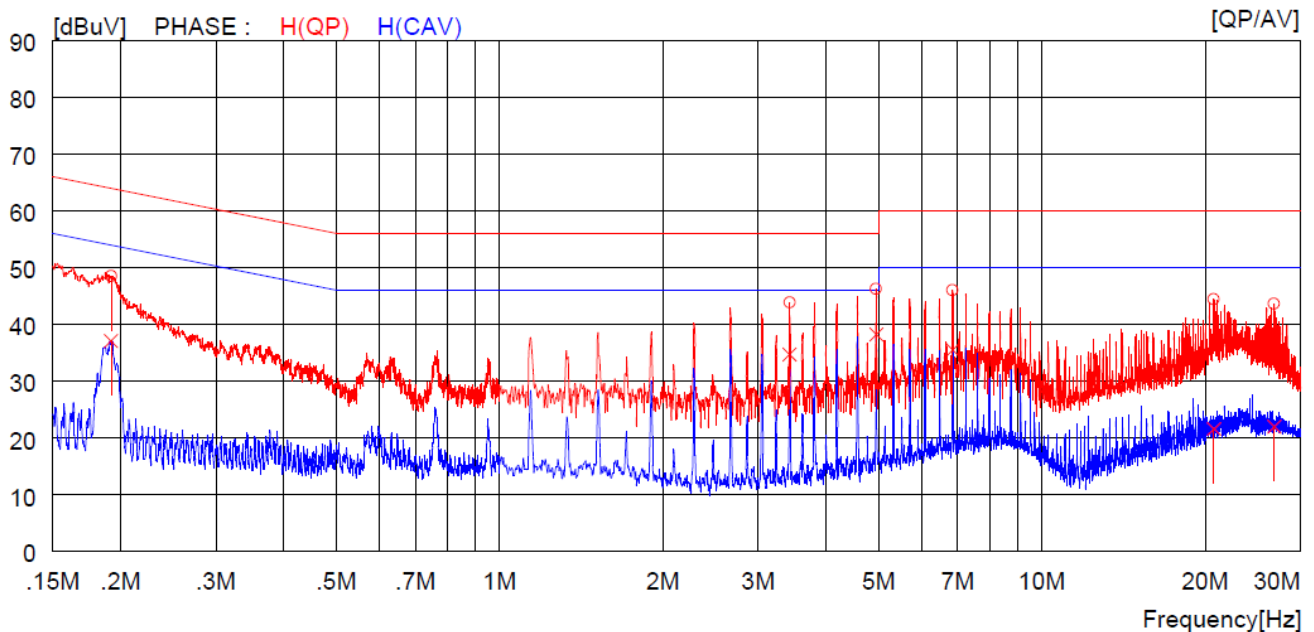
Result : PASSED

EUT : Wireless Charging Pad

Date: August 31, 2016

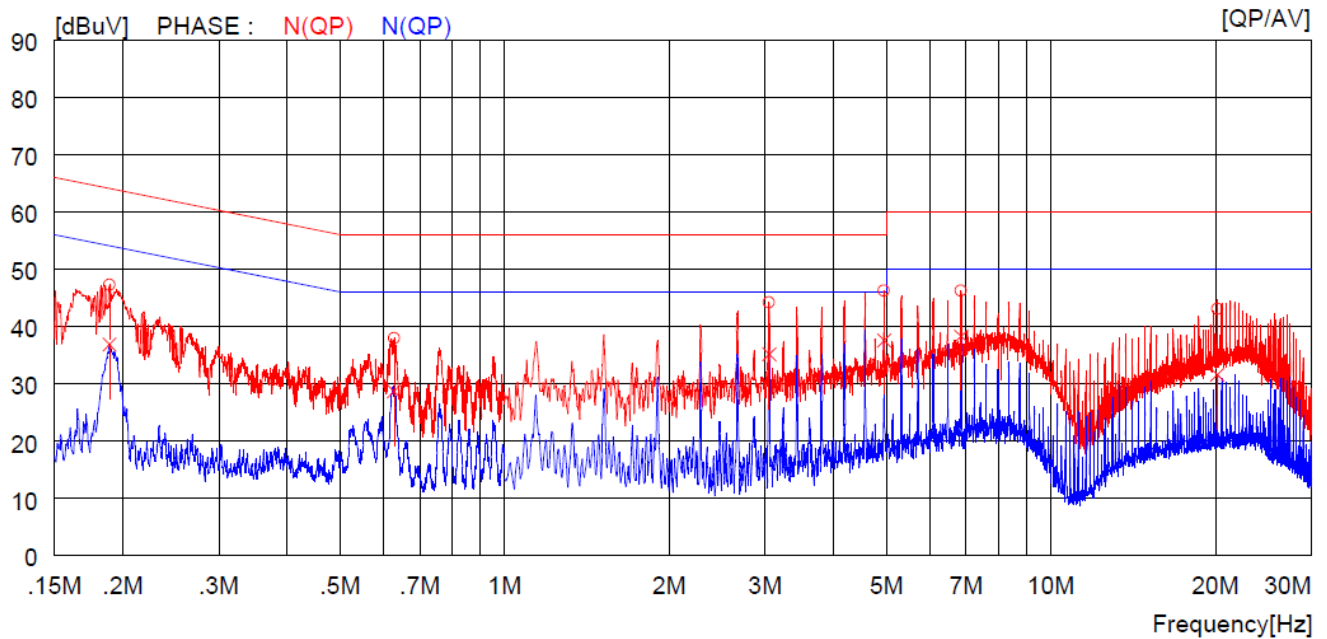
Detector : CISPR Quasi-Peak (6 dB Bandwidth: 9 kHz)

Tested Line : HOT LINE



NO	FREQ [MHz]	READING		C.FACTOR [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	
1	0.19200	48.4	----	0.1	48.5	----	63.9	----	15.4	----	H (QP)
2	3.42800	43.7	----	0.2	43.9	----	56.0	----	12.1	----	H (QP)
3	4.95200	46.1	----	0.2	46.3	----	56.0	----	9.7	----	H (QP)
4	6.85000	45.8	----	0.3	46.1	----	60.0	----	13.9	----	H (QP)
5	20.77000	43.7	----	0.7	44.4	----	60.0	----	15.6	----	H (QP)
6	26.83000	43.0	----	0.7	43.7	----	60.0	----	16.3	----	H (QP)
7	0.19200	----	37.0	0.1	----	37.1	----	53.9	----	16.8	H (CAV)
8	3.42800	----	34.5	0.2	----	34.7	----	46.0	----	11.3	H (CAV)
9	4.95200	----	38.0	0.2	----	38.2	----	46.0	----	7.8	H (CAV)
10	6.85000	----	35.2	0.3	----	35.5	----	50.0	----	14.5	H (CAV)
11	20.77000	----	20.9	0.7	----	21.6	----	50.0	----	28.4	H (CAV)
12	26.83000	----	21.3	0.7	----	22.0	----	50.0	----	28.0	H (CAV)

Tested Line : NEUTRAL LINE



NO	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	
1	0.18900	47.2	----	0.1	47.3	----	64.1	----	16.8	----	N (QP)
2	0.62700	37.9	----	0.1	38.0	----	56.0	----	18.0	----	N (QP)
3	3.04800	44.0	----	0.2	44.2	----	56.0	----	11.8	----	N (QP)
4	4.95200	46.0	----	0.2	46.2	----	56.0	----	9.8	----	N (QP)
5	6.85000	45.9	----	0.3	46.2	----	60.0	----	13.8	----	N (QP)
6	20.16000	42.4	----	0.7	43.1	----	60.0	----	16.9	----	N (QP)
7	0.18900	----	36.8	0.1	----	36.9	----	54.1	----	17.2	N (CAV)
8	0.62700	----	28.6	0.1	----	28.7	----	46.0	----	17.3	N (CAV)
9	3.04800	----	35.0	0.2	----	35.2	----	46.0	----	10.8	N (CAV)
10	4.95200	----	37.4	0.2	----	37.6	----	46.0	----	8.4	N (CAV)
11	6.85000	----	38.0	0.3	----	38.3	----	50.0	----	11.7	N (CAV)
12	20.16000	----	30.9	0.7	----	31.6	----	50.0	----	18.4	N (CAV)

Remark: Margin (dB) = Limit – Level (Result)

The emission level in above table is included the transducer factor that means insertion loss (LISN), cable loss and attenuator.

Tested by: Seok-Jun, Lee / Engineer

9.2 Test data for Using Mid load (500 mA)

Humidity Level : (47 ~ 48) % R.H.

Temperature: (23 ~ 24) °C

Limits apply to : FCC CFR 47, PART 15, SUBPART B, SECTION 15.207(a)

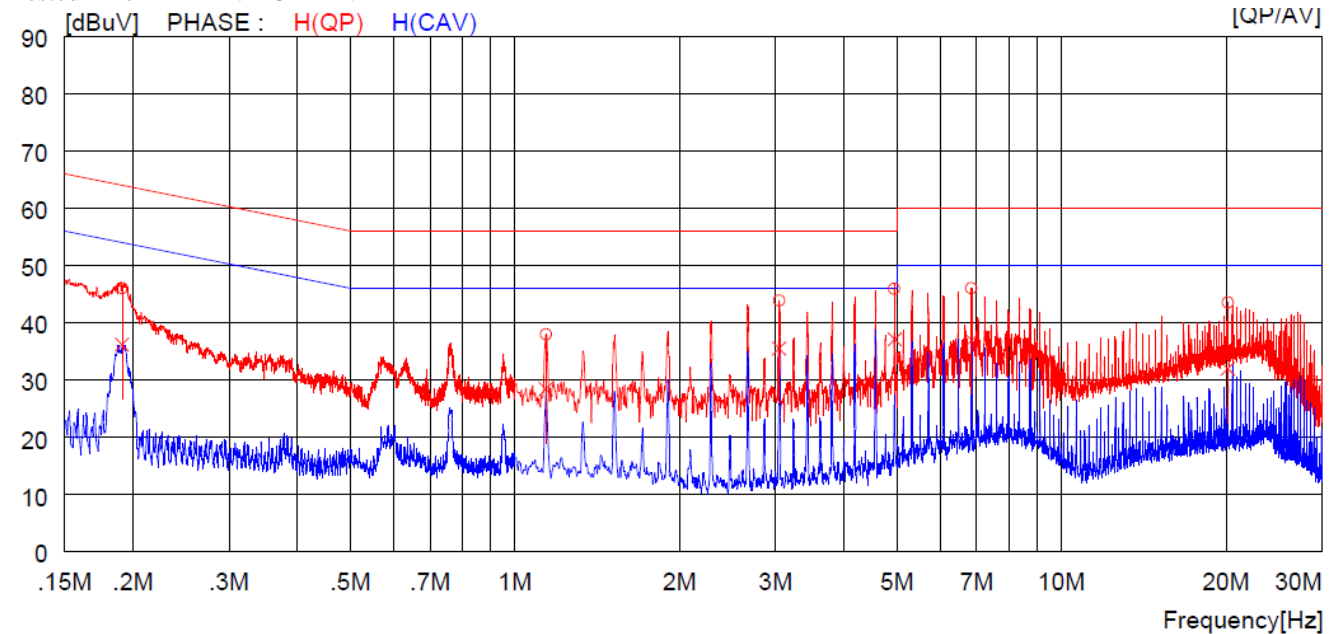
Result : PASSED

EUT : Wireless Charging Pad

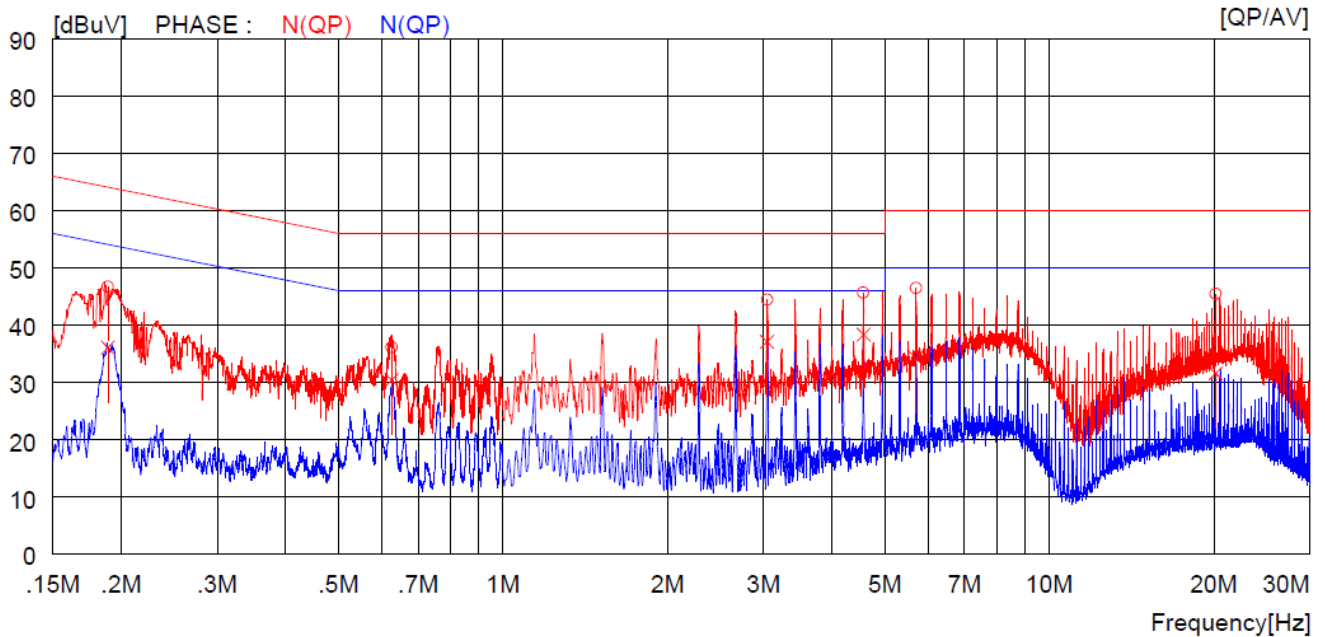
Date: August 31, 2016

Detector : CISPR Quasi-Peak (6 dB Bandwidth: 9 kHz)

Tested Line : HOT LINE



Tested Line : NEUTRAL LINE



NO	FREQ [MHz]	READING		C.FACTOR [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	
1	0.18900	46.6	----	0.1	46.7	----	64.1	----	17.4	----	N (QP)
2	0.62500	36.0	----	0.1	36.1	----	56.0	----	19.9	----	N (QP)
3	3.04400	44.2	----	0.2	44.4	----	56.0	----	11.6	----	N (QP)
4	4.56800	45.5	----	0.2	45.7	----	56.0	----	10.3	----	N (QP)
5	5.70500	46.3	----	0.2	46.5	----	60.0	----	13.5	----	N (QP)
6	20.16000	44.8	----	0.7	45.5	----	60.0	----	14.5	----	N (QP)
7	0.18900	----	36.0	0.1	----	36.1	----	54.1	----	18.0	N (CAV)
8	0.62500	----	30.3	0.1	----	30.4	----	46.0	----	15.6	N (CAV)
9	3.04400	----	36.9	0.2	----	37.1	----	46.0	----	8.9	N (CAV)
10	4.56800	----	38.2	0.2	----	38.4	----	46.0	----	7.6	N (CAV)
11	5.70500	----	34.1	0.2	----	34.3	----	50.0	----	15.7	N (CAV)
12	20.16000	----	30.9	0.7	----	31.6	----	50.0	----	18.4	N (CAV)

Remark: Margin (dB) = Limit – Level (Result)

The emission level in above table is included the transducer factor that means insertion loss (LISN), cable loss and attenuator.

Tested by: Seok-Jun, Lee / Engineer

9.3 Test data for Using Min load (100 mA)

Humidity Level : (47 ~ 48) % R.H.

Temperature: (23 ~ 24) °C

Limits apply to : FCC CFR 47, PART 15, SUBPART B, SECTION 15.207(a)

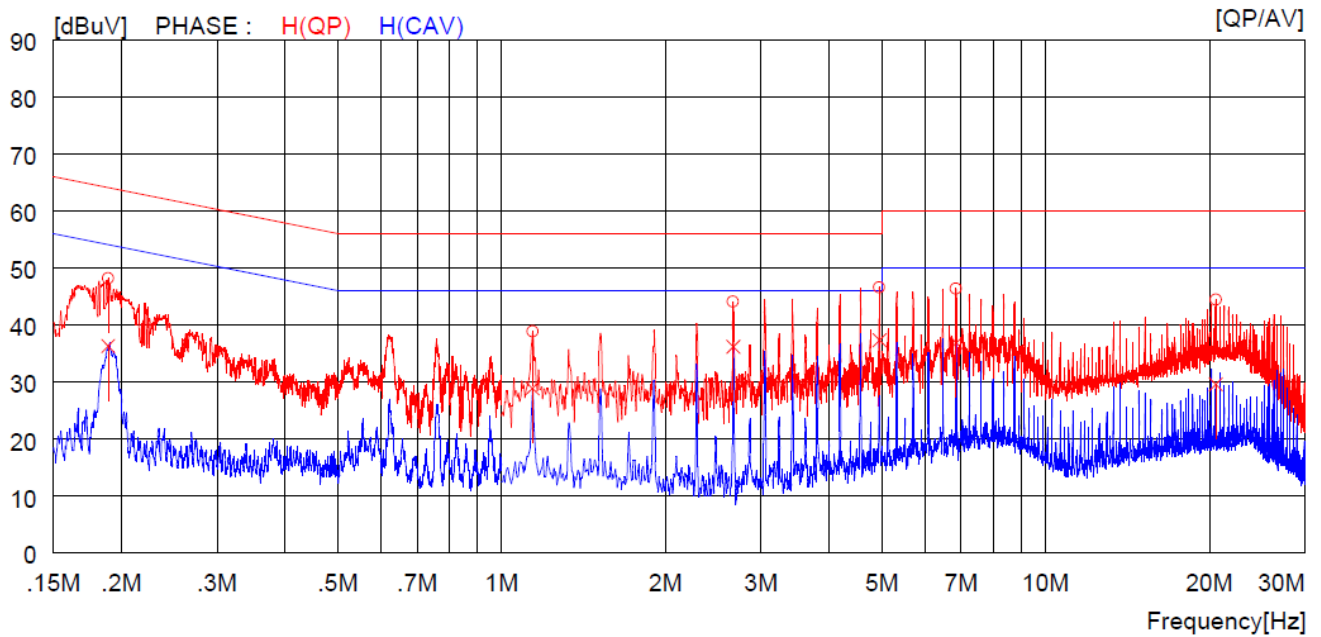
Result : PASSED

EUT : Wireless Charging Pad

Date: August 31, 2016

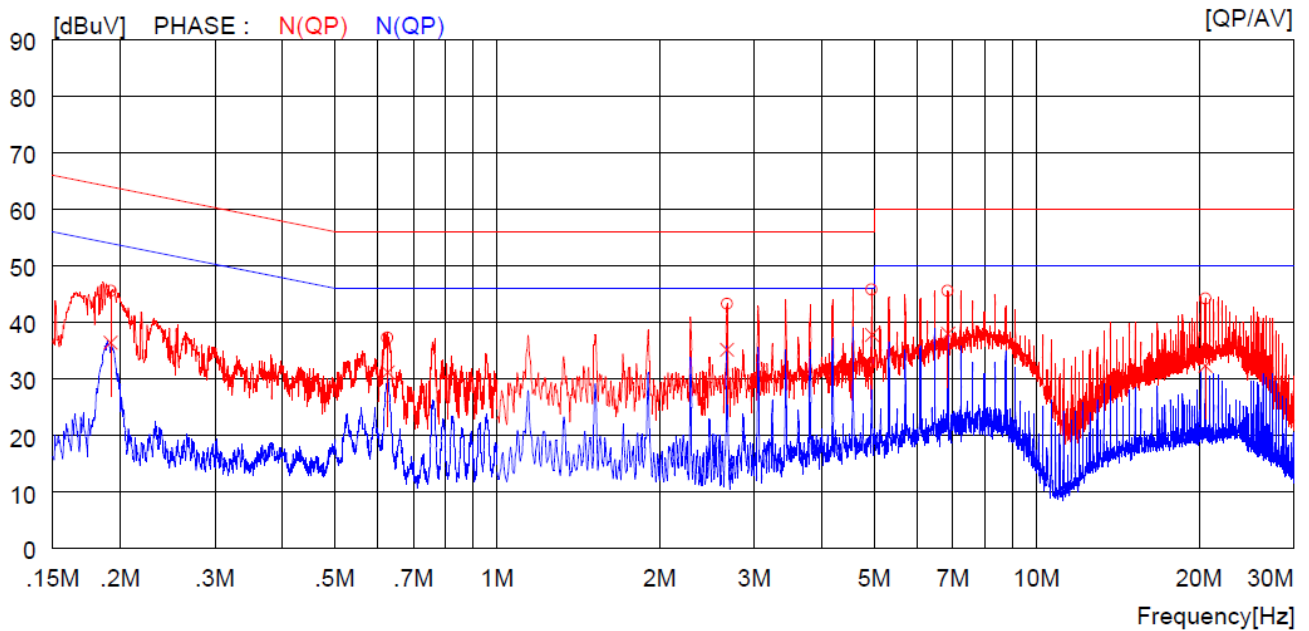
Detector : CISPR Quasi-Peak (6 dB Bandwidth: 9 kHz)

Tested Line : HOT LINE



NO	FREQ [MHz]	READING		C.FACTOR [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	
1	0.18900	48.1	----	0.1	48.2	----	64.1	----	15.9	----	H (QP)
2	1.14000	38.8	----	0.1	38.9	----	56.0	----	17.1	----	H (QP)
3	2.66400	43.9	----	0.2	44.1	----	56.0	----	11.9	----	H (QP)
4	4.95200	46.4	----	0.2	46.6	----	56.0	----	9.4	----	H (QP)
5	6.85000	46.1	----	0.3	46.4	----	60.0	----	13.6	----	H (QP)
6	20.55000	43.7	----	0.7	44.4	----	60.0	----	15.6	----	H (QP)
7	0.18900	----	36.2	0.1	----	36.3	----	54.1	----	17.8	H (CAV)
8	1.14000	----	28.8	0.1	----	28.9	----	46.0	----	17.1	H (CAV)
9	2.66400	----	36.0	0.2	----	36.2	----	46.0	----	9.8	H (CAV)
10	4.95200	----	37.1	0.2	----	37.3	----	46.0	----	8.7	H (CAV)
11	6.85000	----	36.6	0.3	----	36.9	----	50.0	----	13.1	H (CAV)
12	20.55000	----	28.9	0.7	----	29.6	----	50.0	----	20.4	H (CAV)

Tested Line : NEUTRAL LINE



NO	FREQ [MHz]	READING		C.FACTOR [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	
1	0.19200	45.5	----	0.1	45.6	----	63.9	----	18.3	----	N (QP)
2	0.62600	37.2	----	0.1	37.3	----	56.0	----	18.7	----	N (QP)
3	2.66800	43.1	----	0.2	43.3	----	56.0	----	12.7	----	N (QP)
4	4.94800	45.6	----	0.2	45.8	----	56.0	----	10.2	----	N (QP)
5	6.85000	45.3	----	0.3	45.6	----	60.0	----	14.4	----	N (QP)
6	20.55000	43.5	----	0.7	44.2	----	60.0	----	15.8	----	N (QP)
7	0.19200	----	36.3	0.1	----	36.4	----	53.9	----	17.5	N (CAV)
8	0.62600	----	31.1	0.1	----	31.2	----	46.0	----	14.8	N (CAV)
9	2.66800	----	35.0	0.2	----	35.2	----	46.0	----	10.8	N (CAV)
10	4.94800	----	37.6	0.2	----	37.8	----	46.0	----	8.2	N (CAV)
11	6.85000	----	37.7	0.3	----	38.0	----	50.0	----	12.0	N (CAV)
12	20.55000	----	31.6	0.7	----	32.3	----	50.0	----	17.7	N (CAV)

Remark: Margin (dB) = Limit – Level (Result)

The emission level in above table is included the transducer factor that means insertion loss (LISN), cable loss and attenuator.

Tested by: Seok-Jun, Lee / Engineer

9. LIST OF TEST EQUIPMENT

No.	EQUIPMENTS	MFR.	MODEL	SER. NO.	LAST CAL	DUE CAL	USE
1.	Test receiver	R/S	ESCI	101012	Nov. 02, 2015	One Year	■
2.		R/S	ESU	100261	Apr. 06, 2016	One Year	■
3.		R/S	ESPI	101278	Nov. 02, 2015	One Year	■
4.	Spectrum analyzer	R/S	FSU	200319	Apr. 14, 2016	One Year	■
5.	Amplifier	Sonoma Instrument	310N	312544	Apr. 05, 2016	One Year	■
6.	Amplifier	Sonoma Instrument	310N	312545	Apr. 05, 2016	One Year	■
7.	TRILOG Broadband Antenna	Schwarzbeck	VULB9163	9163-255	May 20, 2016	Two Year	■
8.	TRILOG Broadband Antenna	Schwarzbeck	VULB9163	9163-421	Apr. 15, 2016	Two Year	■
9.	Controller	Innco System	CO3000	CO3000/904/ 37211215/L	N/A	N/A	■
10.	LISN	EMCO	3825/2	9109-1867	Apr. 06, 2016	One Year	■
				9109-1869	Apr. 06, 2016	One Year	-
		Schwarzbeck	NSLK8126	8126-404	Apr. 05, 2016	One Year	■
		Schwarzbeck	NSLK8128	8128-216	Apr. 06, 2016	One Year	-
11.	Turn Table	Innco System	DT3000	930611	N/A	N/A	■
12.	Antenna Master	Innco System	MA-4000XPET	MA4000/509/ 37211215/L	N/A	N/A	■
13.	Antenna Master	Innco System	MA4000-EP	MA4000/332/ 27030611/L	N/A	N/A	■
14.	Loop Antenna	R/S	HFH2-Z2	879285/26	Dec. 09, 2014	Two Year	■
15.	Frequency Counter	HP	53152A	US39270295	Oct. 07, 2015	One Year	■
16.	Chamber	ESPEC	PSL-2KP	14009407	Feb. 04, 2016	One Year	■
17.	DC Power Supply	Digital Electronics	DRP-305DN	4030195	Sep. 02, 2016	One Year	■